MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2016/2017

TSA2151 SYSTEM ADMINISTRATION AND MAINTENANCE
(All Sections / Groups)

18 OCTOBER 2016
2.30 PM – 4.30 PM
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of 3 pages including cover page.

2. Attempt **FIVE** out of **SIX** questions . All questions carry equal marks and the distribution of the marks for each question is given

3. Questions 1 - 4 are compulsory and you must answer ALL of them.

4. For questions 5 and 6, choose only ONE (1) question.

5. Write all your answers CLEARLY in the Answer Booklet provided.

Question 1

A. The duties of a system administrator are wide-ranging, and vary widely from one organization to another. List SIX (6) possible tasks when configuring and maintaining system.

(3 marks)

B. Give FIVE (5) general characteristics of UNIX/Linux as an Operating System (OS).

(5 marks)

C. Differentiate between Linux and Windows file system.

(2 marks)

Question 2

A. Discuss the common Linux functions.

(5 marks)

B. Explain the functions of THREE (3) Linux command: `su, top, and ifconfig`.

(3 marks)

C. What is disk partition and give device partition name for primary master disk under Linux Operating System?

(2 marks)

Question 3

A. Dynamic Host Configuration Protocol (DHCP) is a client/server protocol that automatically provides an Internet Protocol (IP) host with its IP address and other related configuration information such as the subnet mask and default gateway. Briefly discuss how to configure your server to use DHCP. Identify the file to edit and give suitable statement.

(4 marks)

B. Identify the connection between `/etc/resolv.conf` file and the DNS server. Give sample `/etc/resolv.conf` directive that show the connection.

(4 marks)

C. Discuss how ISPconfig can help you in performing your duty as system administrator. Identify TWO (2) access level under ISPConfig.

(2 marks)

Question 4

A. File Transfer Protocol (FTP) is one of the oldest and most commonly used protocols found on the Internet today. Although it consider not secure but it still widely used. Analyse area of deployment and access method.

(4 marks)

B. Apache2 is configured by placing directives in plain text configuration files. Categorize FOUR (4) of the configuration based on load modules, directive and environment variables.

(4 marks)

C. For security reasons, it is recommended to disable all those modules that are not in use in Apache web server. Choose suitable command and command options to list enable module and to disable the module.

(2 marks)

Question 5

A. Virtualization uses software to simulate the existence of hardware and create a virtual computer system. Using suitable diagram, illustrate the concept of hardware virtualization model.

(5 marks)

B. While creating bash scripts, it is commonly helpful to check if a file exists before attempting to perform some action. Describe any THREE (3) parameters and their description for checking whether the file is existed.

(3 marks)

C. Write a simple script to check if the file /etc/passwd exists and print The File Exists if it is true.

(2 marks)

Question 6

A. Analyse the backup strategy for home user, small office and large enterprise.

(3 marks)

B. Use tar command and options to backup /home/linux to file linux.tar.gz. Explain each tar options.

(5 marks)

C. A crontab is a simple text file with a list of commands meant to be run at specified times. Given 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/user as your contrab entry. Interpret and explain each entry.

(2 marks)

End of Paper